Types of pigtail flanges



Overview

13 Different Types of Flanges and Their Applications [PDF]In this article, you will learn the different types of flanges, and their applications explained.

Key Takeaways

Pigtail flanges are typically long weld neck or extended neck flanges designed for high-pressure piping systems, providing a secure, stress-reducing connection.

Overview

Pigtail flanges are specialized flanges with an elongated neck that resembles a "pigtail" shape, allowing them to connect pipes, vessels, or equipment while reducing stress at the joint. They are commonly used in high-pressure, high-temperature, or corrosive environments where standard flanges may not provide sufficient strength or alignment flexibility.

Common Types

Long Weld Neck Flanges (Extended Neck Flanges)These flanges have a tapered, elongated hub that extends from the flange face to the pipe, providing a smooth transition and reducing stress concentration. They are welded to the pipe both inside and outside, ensuring a strong, leak-proof connection. Applications include process plants, ships, and large piping networks where high pressure and temperature variations occur.

Heavy Barrel (HB) and Equal Barrel (E) FlangesVariants of long weld neck flanges designed for extremely high-pressure systems. The heavy barrel type has a thicker hub to withstand higher stress, while the equal barrel type maintains uniform thickness along the hub.

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Weld Neck Flanges

Standard weld neck flanges are similar to pigtail flanges but with a shorter neck. They are ideal for high-pressure and high-temperature applications, providing a smooth flow path and minimizing turbulence.

Threaded Flanges

These flanges have internal taper threads and can be attached without welding, suitable for explosive or hazardous environments where welding is unsafe. Typically used in small-diameter pipes (up to 4 inches) for utility services.

Slip-

On and Socket Weld FlangesWhile not true pigtail flanges, these types are sometimes used in low-pressure systems where a long neck is not required. Slip-on flanges slide over the pipe and are fillet welded, whereas socket weld flanges are inserted into a socket and welded around the outside. ApplicationsHigh-pressure pipelines in chemical, oil, and gas industries.

Connections to vessels or columns where stress reduction is critical. Systems requiring frequent maintenance or inspection, as the elongated neck allows easier alignment and bolting.

Key Advantages

Reduces stress concentration at the flange-pipe junction. Provides smooth fluid flow with minimal turbulence. Suitable for high-pressure, high-temperature, and corrosive environments.

Can replace a combination of standard weld neck flanges and pipe spools, simplifying installation. In summary, pigtail flanges are primarily long weld neck or extended neck flanges, with variations like heavy barrel and equal barrel types, designed to handle demanding piping conditions while ensuring structural integrity and smooth flow.

Article Content

13 Different Types of Flanges and Their Applications

In this article, you will learn the different types of flanges, and their applications explained with pictures. Also, you can download the PDF file at the end of this article.

The Complete Flange Types Guide: 15 Types Explained

Understanding the different flange types and their characteristics is essential for proper system design, safety, and reliability. This comprehensive guide covers 15 major flange types used across industrial,

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Flange Types

The most common flange types used in piping systems include slip on flanges, weld neck flanges, socket weld flanges, threaded flanges, lap joint flanges, and blind flanges.

16 Different Types of Flanges

Discover the various types of flanges and their practical applications in industries worldwide. Explore how these essential components connect valves,

Types of Pipe Flanges for Piping and Pipeline Systems

A pipe flange is a circular disc-shaped piping component that attaches to a pipe for blocking or connecting other components like valves, nozzles,

Piping Flanges

Each flange type has specific characteristics, advantages, and best-use applications. This comprehensive guide covers both common flanges that you''ll encounter regularly and specialty

9 Most Used Types of Flanges and Their Applications in

Several types of piping flanges are available, each with unique features and benefits. You must understand the differences between these flanges to choose

Flange Types

Complete Guide to Pipe Flange Styles per ASME B16.5 Pipe flanges come in several standard types, each designed for specific connection methods, pressure ranges, and applications.

Types of Flanges -

Below you will find a short description and definition of each type, completed with an detailed image. Welding Neck Flanges are easy to recognize at the long tapered hub, that goes

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Key Takeaways A pigtail in electrical wiring is a short wire used to connect multiple wires to a single terminal or device, improving safety and efficiency in wiring setups. Benefits of using

Pipe Flanges Selection Guide: Types, Features, Applications

Pipe flanges are used for dismantling piping systems, temporary or mobile installations, transitions between dissimilar materials, and connections in environments not conducive to solvent cementing.

What is a Pigtail Connector? A Complete Guide

Learn about pigtail connectors—short wires with a connector on one end—used to safely and efficiently join, extend, or repair electrical circuits.

Various Flanges and their Features, Uses & Benefits

Discover what flanges are, their importance in industrial piping, and the different types of flanges including weld neck flange, slip-on flange, blind

(PDF) Types of Flanges

The flange can withstand high pressure and temperature, so they have different pressure and temperature ratings for different materials. In a

7 Types of Flanges Used in Piping Systems

A flange is a type of mechanical joint system that provides a reliable means to connect pipes, valves, pumps, and other components to form a seal-proof piping

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